

## Introduction

# Arnold Ephraim Ross (1906–2002)



Arnold Ephraim Ross was born in Chicago on August 24, 1906. He spent his childhood in Odessa, Russia, and returned to Chicago in 1922. He earned his Ph.D. in mathematics under the direction of L.E. Dickson at the University of Chicago, graduating in 1931. He then taught at Caltech, People's Junior College, and St. Louis University. During World War II he served as a research mathematician in the US Navy. In 1946 he was appointed the head of the Mathematics Department at the University of Notre Dame. In 1963 Professor Ross left Notre Dame to become the chairman of the Department of Mathematics at the Ohio State University. In 1969, the *Journal of Number Theory* was founded at Ohio State by Professors Bambah, Roquette, Ross, Woods, and Zassenhaus. In 1976, Arnold Ross retired from OSU.

Perhaps the most notable lifetime achievement of Arnold Ross was the summer program he started at Notre Dame for high school students talented in mathematics. Professor Ross divined the need for encouraging such students even before the Sputnik era. In the summer program, Ross developed innovative methods of imparting creativity and problem-solving skills in a manner benefiting the students throughout their lives. The Ross Program moved to Ohio State in 1964 and continues to thrive there. Ross directed and taught in that program every summer until poor health forced him to retire in 2000 at age 94. In the 1970s Ross carried this program to West Germany and India, and from 1975 to 1984 he assisted with a similar program at the Australian National University. That Summer School continues to flourish, and aspects of Ross' approach are still discernible. Alumni of the highly successful Ross program at Ohio State have created similar programs at other universities in the United States and Canada.

Professor Ross also initiated innovative outreach programs (New Horizons and Horizons Unlimited) in the 1960s for inner city school children in Columbus, Ohio, and served on several national committees concerned with mathematics education. He received many academic honors, including national awards for teaching and service in mathematics: the OSU Distinguished Teaching Award (1974) and Distinguished Service Award (1981), the Mathematics Association of America Award for Distinguished Service (1986), and the American Mathematical Society Citation for Public Service (1998). In 1993, the American Math Society established the "Arnold Ross Lecture Series" in his honor. Professor Ross also received an honorary Doctoral Degree from Denison University in 1984.

Arnold Ross married Bertha (Bee) Horecker in 1931. Although they had no children, they had a long and happy marriage until her death in 1983. Professor Ross was fortunate to find love again. In 1990, he married Madeleine Green, who remained with him in a close relationship for the rest of his life.

It is said that Arnold Ross built his profoundly original training programs in mathematics on the belief, born in Odessa and Chicago, that talent is everywhere and only awaits nurturing. Through his lifelong nurturing of brilliant young mathematicians, Ross has extended his influence worldwide and for many generations to come. Many of the most prominent number theorists of our time began their studies with Professor Ross. It is therefore most fitting and proper that the *Journal of Number Theory* honor one of its original editors and dedicate this issue to his memory and legacy.

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